U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Standard Chlorine Jacobus - MAC Products Vapor Intrusion - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: **POLREP #4**
All SSDSs Installed, IA Sampling Continues
Standard Chlorine Jacobus - MAC Products Vapor Intrusion
A21V
Kearny, NJ
Latitude: 40.7409750 Longitude: -74.1126302

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Date: 4/22/2015

Reporting Period: February 13, 2015 though April 22, 2015

1. Introduction

1.1 Background

Site Number:	A21V	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	PRP	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	8/15/2014	**Start Date:**	8/15/2014
Demob Date:		**Completion Date:**	
CERCLIS ID:	NJN000206579	**RCRIS ID:**	
ERNS No.:		**State Notification:**	12/16/2011
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

This is a Removal Action undertaken by MAC Products, the Responsible Party (RP), under a signed Administrative Settlement Agreement and Order on Consent (Agreement). This qualifies as a BB coded event.

1.1.2 Site Description

The Site is located in an industrial corridor in the southern part of Kearny, Hudson County, New Jersey. The Site consists of two adjacent, separately owned properties currently occupied by active businesses. MAC Products, located at 60 Pennsylvania Avenue (Block 289, Lots 16, 16.01, 17), represents the northern property on the Site. The company designs and manufactures various products for the utilities, transportation and construction industries. MAC Products is bordered to the north by Pennsylvania Avenue; the east by Jacobus Avenue; the south by the Melon Leasing property; and the west by a tractor trailer parking lot. Although the Site is viewed as two individual properties, this POLREP is reflective on actions taken solely on MAC Products (herein referred to as "property" or “facility”).

1.1.2.1 Location

The 4.5 acre MAC Products property contains many interconnected buildings in three distinct areas. Buildings are known as A, B and C. Building A is the southernmost located structure; Building B is in the center of the property; Building C is the eastern most connected structures. All surface areas belonging to MAC Products are paved.

1.1.2.2 Description of Threat

There is an actual or potential exposure to human populations at the MAC Products facility. Results from a sub-slab sampling event indicate high concentrations of volatile organic compounds (VOCs) under several buildings throughout the property. In particular, concentrations of Trichloroethylene (TCE) under Building B were found as high as 210,000 µg/ m^3. Additionally, levels of naphthalene and 1,4-dichlorobenzene were found to be of concern. Subsequent indoor air samples confirmed a vapor intrusion pathway for TCE and additional VOC compounds. Concentrations of TCE were found to exceed EPA risk-based screening criteria in an occupational setting. Workers occupy the facility 5-6 days out of the week for approximately 8 hours per day.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

In September 2012 EPA approached MAC Products with request to allow Agency personnel to collect sub-slab samples under the buildings located throughout the property. The request was presented based on ground water findings from samples collected at the neighboring property, Melon Leasing. In lieu of sampling, MAC Products requested the opportunity to install sub-slab depressurization systems (SDSs). EPA-generated criteria was given to MAC Products that must be met in order for the Agency to entertain the idea of the proposal. In November 2012 MAC Products request an extension for providing details on a mitigation system due to infrastructure damage as a result of Hurricane Sandy.

In January 2013 EPA and contractors visited the Melon Leasing and MAC Products facilities. Surface samples were collected from the Site and analyzed for dioxin. Concentrations of dioxin were found at levels of concern on the MAC Products property. As a result, all surface areas were paved under a separate removal action undertaken by the PRP.

Dialog regarding the potential installation of SDSs continued in April 2013 when MAC Products hired an environmental consultant. Following internal discussions, MAC Products decided to conduct a conventional vapor intrusion investigation at the property by studying the sub-slab and indoor air prior to installation of any remediation systems.

In September 2013 a total of 18 sub-slab samples were collected from the various buildings through the MAC Products facility. MAC Products shared the sample results towards the end of November 2013. Concentrations of TCE were found as high as 210,000 µg/m^3 in Building B. In addition, concentrations of tetrachloroethylene (PCE) were found at 500,000 µg/m^3, naphthalene at 380,000 µg/m^3 and 1,4-dichlorobenzene at 95,000 µg/m^3. EPA discussed the severity of high TCE concentrations and

requested indoor air samples be collected. In December 2013 EPA and MAC Products collected split indoor air samples in all three buildings. A total of fourteen (14) samples were collected and analyzed for TO-15 constituents. TCE concentrations were found as high as 3.6 µg/m^3 in Building B, naphthalene at 6.3 µg/ m^3 and 6.5 µg/ m^3 in Building A and C respectively and 1,4-dichlorobenzene at 24µg/ m^3 and 26 µg/ m^3 in Building B.

In January 2014 MAC Products stated as a result of the VOC concentrations found in sub-slab and indoor air samples, SDSs would be installed. Several months later EPA requested additional sampling at the facility. The sampling design was expanded to include areas of MAC Products occupied by sensitive populations. In March 2014 a total of twenty-three (23) locations were sampled, including a re-sampling of the original 14 locations from the December 2013 event. Results from the March 2014 event showed concentrations of TCE at 11µg/ m^3, naphthalene at 12 µg/ m^3 and 1,4-dichlorobenze at 120 µg/ m^3.

Concentrations of TCE were found to exceed EPA risk-based screening criteria in an occupational setting. In addition, a vapor intrusion direct pathway to indoor air was found to exist for this and other VOC compounds. In April 2014 MAC Products verbally agreed to enter into an Agreement with EPA for the installation and monitoring of SDSs.

On August 15, 2014 EPA and MAC products entered into an Administrative Settlement Agreement and Order on Consent for the evaluation, construction and maintenance of SDSs within Building B. Work Plans, a Health and Safety Plan, an employee notice of activities and a Quality Assurance Project Plan were reviewed, evaluated and approved prior to approval of the Agreement.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

By January 19, 2015 a total of seven (7) sub-slab depressurization systems (SSDSs) were installed throughout Building B of the MAC Products Site, including one in the Oil Transfer Room (OTR). An indoor air (IA) sampling event was conducted in February 2015 to determine if the SSDSs were working efficiently to reduce the concentrations of contaminants. Additional IA samples were collected in March 2015, allowing for an extended commissioning period of the SSDS installed in the OTR. Results show a downward trend in the concentrations of TCE, PCE, naphthalene, and 1,4-dichlorobenzene, however levels remain above criteria outlined in the Administrative Settlement Agreement and Order on Consent (ASAOC).

2.1.2 Response Actions to Date

Following the installation of SSDSs throughout Building B, a round of IA samples were collected to determine the efficacy of the systems. On February 13, 2015 indoor air samples were collected from a total of sixteen (16) locations, including one (1) ambient. Overall, a significant decrease in the concentrations of all parameters of interest was observed. Concentrations of TCE and PCE were found below EPA and NJDEP regulatory and health advisory levels at all locations. TCE was found as high as 2 µg/m^3 and PCE as high as 14 µg/m^3, placing them below the conservative screening level of 3 µg/m^3 as well as Regional risk based values. Concentrations of 1,4-dichlorobenzene were found as high as 58 µg/m^3,also below EPA Removal Screening Levels and Regional risk-based levels established for the Site. However, the NJDEP Indoor Air Screening Level (IASL) of 3 µg/m^3 continued to be exceeded at numerous sample locations. Concentrations of naphthalene were found as high as 27 µg/m^3, below EPA RSL but above the Region 2 risk-based number of 13 µg/m^3. In addition, the NJDEP IASL of 3 µg/m^3 was also exceeded in numerous samples. The highest levels of all parameters were found in the OTR sample locations.

Following receipt of the analytical results, an additional IA sampling event was scheduled to allow for a 60-day commissioning of the SSDS located in the OTR. On March 22, 2015 a total of three (3) IA samples were collected; two (2) in the OTR and at one (1) ambient location. Again, a decreasing trend in concentrations was observed with all compounds. Concentrations of TCE remained at or below 2 µg/m^3, below EPA and NJDEP levels of concern. PCE concentrations lowered further to 8 µg/m^3, below

EPA and NJDEP levels of concern. Levels of 1,4-dichlorobenzene were 18 µg/m^3 and 32 µg/m^3, still above the NJDEP IASL of 3 µg/m^3. Concentrations of naphthalene dropped to 7 µg/m^3 and 21 µg/m^3, still above EPA's Regional risk-based level of 13 µg/m^3 and NJDEP IASL of 3 µg/m^3.

Criteria outlined in the Administrative Settlement Agreement and Order on Consent state IA levels must be managed at concentrations at or below the NJDEP IASLs. As indicated by the February and March 2015 sampling events, a total of thirteen (13) locations throughout Building B exceed the NJDEP IASL of 3 µg/m^3 established for 1,4-dichlorobenzene. A total of two (2) locations exceed the NJDEP IASL of 3 µg/m^3 for naphthalene, both located in the OTR. Of these OTR locations, one (1) exceeds the Region risk-based level of 13 µg/m^3 established for naphthalene.

EPA requested MAC Products to develop a concept for lowering the IA concentrations to meet the criteria stated in the ASAOC.

Refer to previous Pollution Reports for response activities prior to this operational period.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

MAC Products has been identified as a Potentially Responsible Party for this project.

2.2 Planning Section

2.2.1 Anticipated and Planned Response Activities

MAC Products will institute engineering controls to increase the ventilation throughout Building B. Several overhead and exterior doors will be open as much as possible to allow for fresh air to enter and provide better circulation throughout the work areas. A round of IA samples will be collected in June 2015 to learn of any changes in the concentrations of contaminants. Prior to sampling, MAC Products will generate and provide a contingency plan to be implemented should concentrations continue to be exceeded. If not, sampling in the heating season will determine if samples were influenced by increased, seasonal ventilation.

2.2.2 Next Steps

MAC Products has made an argument that fugitive vapors may be trapped in various locations throughout Building B due to confinement caused during the cold weather season and limited air circulation. To facilitate the removal of these potentially trapped vapors, an increase in air circulation and increased introduction of ambient air has been requested. Numerous overhead and exterior doors are located throughout the working areas of Building B and can easily be opened during the warmer weather. Fans may be placed in smaller, confined areas to assist in air movement. A round of IA samples will be collected in June 2015 to determine if additional air circulation and extended operation of the SSDSs have lowered concentrations of 1,4-dichlorobenzene and naphthalene to levels addressed in the ASAOC. Prior to sampling, MAC Products is to generate a contingency plan that will be implemented immediately following the results of the sampling event, should concentrations remain at unacceptable values. It is understood that additional air introduction and circulation may dilute samples from true or realistic values when compared to results obtained during the heating season. The Operations, Management and Maintenance (OMM) Phase will not commence until the efficacy of the SSDSs has been proven during heating and non-heating seasons.

Additionally, until results are received from the June 2015 sampling event, limited and restricted access to the OTR is to remain in effect.

2.2.3 Issues

None to report.

2.3 Logistics Section

All logistical needs and issues will be handled by the PRP.

2.4 Finance Section

2.4.1 Narrative

Cost recovery measures will be taking place in parallel with the removal action. As per the Administrative Settlement and Agreement on Consent, EPA will charge MAC Products for time and resources following initiation of the Removal Action and implementation of the Agreement.

2.5 Other Command Staff

2.5.1 Safety Officer

This position is being addressed by Vincent Pappalardo of Eikon Planning, a sub-contractor to MAC Products.

2.5.2 Liaison Officer

This position is inactive for the removal action.

2.5.3 Information Officer

The OSC will act as the point of contact for information being requested by employees of MAC Products. Public Affairs has not been activated for this response.

3. Participating Entities

3.1 Unified Command

UC is not necessary for this removal action.

3.2 Cooperating Agencies

EPA has been communicating with NJDEP on efforts to have SDSs installed and any additional work required.

4. Personnel On Site

EPA will allocate one OSC for operational activities.

5. Definition of Terms

Definition of Terms

Assisting and Cooperating Agencies - Agencies who are assisting the EPA response, but are not a part of Unified Command.

E Goods - Electronic machines which contain hazardous components. Emergency Response - any activity undertaken by the Operations Section which mitigated an immediate threat to human health or the environment.

FRP - Facility Response Plan. Under the Clean Water Act, as amended by the Oil Pollution Act, a plan for responding, to the maximum extent practicable, to a worst case discharge, and to a substantial threat of such a discharge, of oil. Required by certain facilities that store and use large quantities of oil.

Household Hazardous Waste - Small quantity waste from households that contain corrosive, toxic, ignitable, or reactive ingredients is hazardous. This includes pesticides, paint, solvents, etc.

Hazardous Debris - Debris which contains compounds that make it inappropriate for municipal landfill disposal

Monitoring - Using equipment which will give limited real-time information about constituents in environmental media. This method is used most often for air and water testing.

RCRA - Resource Conservation and Recovery Act.

RMP- Risk Management Plan. Under the Clean Air Act, certain facilities with large quantities of toxic

potentially air born chemicals whose releases may impact human populations are required to submit to EPA a plan for hazard assessment, prevention, and emergency response.

Sampling -The process of taking environmental media for analysis at a laboratory of its constituents. These tests may require multiple days to complete, but test for a wider array of constituents than monitors.

Small Container - any container with a potential capacity of less than 5 gallons.

TRI - Toxic Release Inventory - A publicly available EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990.

Unified Command - A structure based on the Incident Command System (ICS) that brings together the Incident Commanders of all major organizations involved in the incident in order to coordinate an effective response, while at the same time allowing each to carry out their own jurisdictional, legal, and functional responsibilities.

White Goods - Large home electronics such as refrigerators, washing machines, and dryers.

WW - Wastewater Treatment Facilities

6. Additional sources of information

6.1 Internet location of additional information/report

epaosc.org

6.2 Reporting Schedule

MAC Products is currently scheduled to provide EPA with bi-weekly progress reports. Following evidence the SSDSs are working appropriately and commencement of the OMM Phase, reports will be limited to monthly.

7. Situational Reference Materials

Refer to the documents section of epaosc.org